REMARKS

By this amendment, claims, 1, 7, and 14 are revised and new claim 20 is added to place this application in condition for allowance. Currently, claims 1, 3-5, 7, 10, 11, and 14-20 are before the Examiner for consideration on their merits.

In review, claim 1 is directed to thickening liquid hydrocarbon fuel oils. Claim 7 defines a composition of matter and claim 14 now defines the composition of matter as a barbeque lighting fuel oil. In essence, the claims require a liquid hydrocarbon and a solid polymer, wherein the liquid hydrocarbon is a low odor kerosene having a particular flashpoint limitation and the polymer has a particular molecular weight. Claims 1 and 7 are also revised to include characteristics of the thickened kerosene as found on page 1 of the specification, the last three lines thereof.

Each of these independent claims is rejected over prior art, with the rejection indicating that Sippel, Commercial Kerosene, and Ram are applied against claims 1, 4-5, 7, 10, and 11 and these three references with Van Gilder to address claims 3 and 15. Notably, no written rejection is specifically made against claim 14, although it is addressed in the Response section of the rejection.

Sippel is alleged to teach the combination of the liquid hydrocarbon and polymer but it is admitted that the flashpoint or molecular weight limitations are not taught.

The kerosene and flashpoint are said to be inherent in the teaching of Commercial Kerosene.

The molecular weight of the polymer is said to be inherent in the teachings of Ram.

Van Gilder is cited to address the limitations of dependent claims 3 and 15 concerning the relative amounts of the kerosene and polymer.

Applicants respectfully traverse the rejection on the grounds that the Examiner has committed error in the reasoning used in making the rejection. These errors are addressed in their respective headings alone or the current rejection no longer applies when considering claims 14 and 20.

ARGUMENTS

A prima facie case of obviousness is not established against claim 20.

Claim 20 is an application of the fuel oil made by claim 1 to charcoal for lighting purposes. No new matter is introduced by this claim since the specification expressly describes this use, see page 1, the last five lines.

Claim 20 raises the question of whether the composition of Sippel, even if modified according to the teachings of Commercial Kerosene, RAM, and Van Gilder, would be used in the claimed manner. The question must be answered in the negative since Sippel is concerned with a self igniting incendiary material, useful for flamethrowers and the like.

In order to allege that the claimed application in claim 20 is obvious, the Examiner must have a reason for doing so. There is absolutely no reason to take the flamethrower material of Sippel and use it for lighting charcoal. Therefore, claim 20 is patentable over the cited prior art.

A prima facie case is not established against claim 14

Claim 14 is revised to clarify that what is being claimed is a barbeque lighting fuel. This revision raises two issues, the first being whether the Examiner must treat the claim preamble as a limitation and, if so, whether such a fuel is obvious from the cited prior art.

The determination of whether a preamble must be considered as a limitation of the claim is addressed in MPEP 1211.02. Consistent with the holding of the *Pac-Tec* case cited in MPEP 2111.02.I, the invention of claim 1 is not just a composition but a barbeque lighting fuel. Patentability is to be measured in this context because Applicant's intent in the invention is the development of a fuel that is made for the purpose of lighting barbeques. Thus, claim 14 must be construed not as any fuel but a barbeque lighting fuel, much like the fuel one would purchase at the local home improvement store.

On the assumption that the Examiner agrees that claim 14 must be considered in the context of a barbeque lighting fuel, the question becomes whether this fuel is taught by the combined prior art.

Putting aside the arguments contained herein that the Examiner has not even established a prima facie case of obviousness against the claimed composition, Applicant further contends that Sippel is not a barbeque lighting fuel and because of this, a prima facie case of obviousness is not made out against claim 14. Commercial Kerosene and RAM say nothing about barbeque lighting fuels. Van Gilder is concerned with solutions of rubbery polymers and also says nothing concerning barbeque lighting

fuels. Lacking any suggestion in any of the prior art of a barbeque lighting fuel, a prima facie case of obviousness is not established and claim 14 is patentable over the cited prior art.

The Examiner has committed error in the interpretation of Commercial Kerosene and RAM on the issue of inherency.

In the rejection, the Examiner seems to be saying that both of Commercial Kerosene and RAM disclose the claimed kerosene and polymer such that the invention is made by merely taking a kerosene that is encompassed by the teachings of Commercial Kerosene and taking the polymer of RAM and using it in Sippel. This is error since the Examiner has misinterpreted the teachings of Commercial Kerosene and RAM and this misinterpretation taints the rejection such that it must be either remade or withdrawn.

As the Examiner knows, for something to be inherent, it must always be present, the possibility or probability cannot support such a position.

Commercial Kerosene teaches that kerosene has the physical state of a low viscosity liquid with characteristic odor with a flashpoint in the range 37 to 65°C. There is a note to the effect that the physical properties may vary, depending on the composition. In relation to the flashpoint, presumably this means that the flashpoint of any given composition would fall somewhere within the range 37 to 65 °C, rather than the range itself varying, and in relation to the physical state there is a teaching that, presumably, the viscosity may change depending on the composition (there are no

quantitative values for viscosity) and possibly that the odor may change in some unspecified way.

RAM is concerned with the polyolefin polymer used as a thickener and teaches merely that the five samples of commercially-available polymers as tested had a range of molecular weights embracing (with considerable overlap especially at the upper end) the range of present claim 1. In other words, it is contended that these references merely establish that commercially-available kerosenes have a range of flashpoints which embraces that of the present invention and that commercially-available polyolefin polymers are available in molecular weights within the requirement of the present invention. This is hardly surprising; a hydrocarbon fuel selected from commercially-available kerosenes and a polymer selected from commercially-available polymers are bound to have properties which can be found in the literature. There is, however, no "inherency" in the Commercial Kerosene or Ram references concerning low odor kerosenes having a flashpoint greater than or equal to 62°C and a polymer having a molecular weight in the range $1.4x10^6$ to $2.0x10^6$. Thus, the test set by MPEP 2112 is not satisfied by these references.

Indeed, the Examiner himself says on page 3 of the Detailed Action that kerosene **can** have a flashpoint in the required range and **can** be a low odor kerosene, and that polyisobutylene **can** have a molecular weight in the required range (emphasis added). As seen above, in fact the Commercial Kerosene reference does not say that kerosene is available with "low odor" and in any event the Examiner's use of "can" is

surely an admission of non-inherency, equating with the "may occur or be present in..." wording of MPEP 2112 and which is insufficient for basing an argument of inherency.

Put another way, the Examiner is alleging that Commercial Kerosene and RAM are anticipatory regarding the claimed characteristics of odor and flashpoint for the kerosene and the molecular weight of the polymer. This allegation is clearly erroneous since Commercial Kerosene says nothing about odor and this alone prevents the Examiner from construing Commercial Kerosene as anticipatory in this regard. Moreover, there is nothing in Commercial Kerosene about a low odor kerosene that has the claimed flashpoint. Likewise the claimed range of molecular weight is, at best overlapped by RAM. Since the rejection improperly concludes that Commercial Kerosene and RAM teach the claim limitations in question, the rejection is improper and must be either withdrawn or remade.

<u>The Examiner has committed error in interpreting the teachings of Sippel and in the reasoning used for modifying Sippel.</u>

Critical to the rejection is the Examiner's position that Sippel teaches that any kerosene or polymer can be employed in Sippel's composition. The Examiner uses this position to say that he can pluck a kerosene from Commercial Kerosene that would meet the claimed low odor and flashpoint and pluck a polymer from RAM that would have the claimed molecular weight and, voila, the invention is produced.

The error in this reasoning is that Sippel does not provide such an omnibus teaching, and in fact, the prior art does not provide the guidance to select the specifically claimed kerosene and polymer for use in Sippel.

In fact, Sippel is very clear on the characteristics of his composition. The compositions of Sippel are intended for use in self-igniting (pyrophoric) incendiary devices and which, in particular, will ignite over water (column 1, line 40) but in any event which are capable of undergoing instantaneous ignition either in contact with an oxygen-containing substance (such as air) or which can be modified to ignite on impact with a target (column 2, lines 2 to 5). For this purpose, the compositions include an organo-metallic compound, a liquid hydrocarbon fuel and a gelling agent. The liquid hydrocarbon fuel may include, among other hydrocarbons, a military jet fuel JP-5, described as a "specially refined kerosene which has a flashpoint of 140°F" (60°C). One suitable gelling agent is a polyisobutylene polymer (e.g. Vistanex) but is more usually an inorganic compound, namely silicon dioxide. Where Vistanex is used in the examples, it is the L-140 grade having (according to RAM) a molecular weight of $2.04x10^6$ and, thus, outside the range of the present invention.

Thus, neither the polymer nor kerosene of Sippel meets the claim limitations. Moreover, Sippel does teach that any polymer or any kerosene is suitable for the incendiary composition of Sippel. The Examiner has drawn this conclusion but pointed to no factual basis to support this. Therefore, it is error for the Examiner to point to Sippel as a reason to use a kerosene and polymer having the claimed characteristics.

The mere fact that the kerosene and polymer may be derived from the teachings of Commercial Kerosene and RAM does not mean that their mere existence is grounds for use in Sippel. Why choose a kerosene and polymer with the particular attributes of claim 1. Sippel provides no reason to do so. Commercial Kerosene does not teach the combination of low odor and the specific flashpoint. RAM does not point to the need for a specifically defined molecular weight range.

The Examiner is engaging in an obvious to try approach without any guidance from the prior art and this approach has been rejected by the Federal Circuit in *In re Kubin, 561 F.3d 1351* (Fed. Cir. 2009). Here, the Federal Circuit stated that "obvious to try" does not constitute obviousness when what would have been "obvious to try" would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication or which parameters were critical or no direction as to which of many possible choices is likely to be successful. This is the exact situation here. Commercial Kerosene and RAM discloses a multitude of different kerosenes and polymers and the Examiner says that the ones that happen to satisfy the claim limitations can be used. This is error since there is no guidance from any of the prior art in this regard.

Moreover, the invention is not an arbitrary selection of a polymer and kerosene to obtain a patent. Instead, the inventor has discovered that an improved barbeque lighting fuel is made when a certain kerosene is used and it is thickened with a certain polymer.

Based on the discussion above, the real question of patentability is whether one of skill in the art would be taught to modify Sippel and use another kerosene and polymer that happen to satisfy the claim limitations.

The fact that a kerosene and polymer satisfying the claimed conditions exists does not end the issue of patentability. Applicant is not claiming to have invented a new kerosene or a new polymer. However, Applicant is claiming to be the first to combine the two together for the purpose of creating an improved barbeque lighting fuel, and the advantages obtained by the inventive combination are complete unexpected given the fact that none of the cited prior art has anything to do with a composition that is designed to work in barbeque lighting. These advantages are now stated in the claims and their presence in the claims are further substantiation that the invention is not prima facie obvious based on the cited prior art.

To the extent that the Examiner looks to Van Gilder to support the rejection, , is the skilled person to understand from Van Gilder that "any hydrocarbon" could be used in the composition of Sippel to produce a self-igniting composition, given the strictures imposed by Sippel? Were that the proposition, one would have to conclude that it would be "any hydrocarbon except kerosenes having a flashpoint above 140°F". If one was then to recognize that, for the purpose of providing a barbecue lighting fuel, it would be necessary to alter the criteria disclosed by Sippel, precisely where in the prior art can the teaching towards the invention be found?

To recap, Sippel does not support the rejection and the Examiner lacks the necessary reasoning to pluck a kerosene and polymer from the secondary references to

make the rejection; the Supreme Court's mandate of the presence of an articulated reason to make an obviousness rejection is missing. Thus, the rejection should be withdrawn.

The Examiner has committed error in asserting that kerosene and a polymer having the claimed function can be used in Sippel with no change in their respective functions and that such a use yields only predictable results.

Here, the Examiner is using the decision in *KSR* to support the allegation of obviousness. However, the Examiner's assumption that there is no change in respective functions and the contemplated modification of Sippel would only yield predictable results in not based on any objective facts. Where is the basis in fact for the assumption that there is no change in the performance of the incendiary composition of Sippel when a different kerosene and polymer are used in Sippel?

What does Sippel teach concerning the extending agent that is combined with the gelling agent and the organic self igniting compound? Sippel teaches that it can be gasoline, either motor or aviation fuel or jet fuel, e.g., JP-4 or JP-5. JP-5 is identified as a particular kerosene with a defined freezing point and flashpoint of 140 degrees F, which is not within the claimed range.

Sippel does not provide any guidance on the types of extending agents other than exemplifying some. One thrust of Sippel is the need to control the amount of the self-igniting compound with the extending agent for purposes of self ignition. In col. 5, lines 9-32, it is taught that self ignition does not occur in every instance and only when

the relative amounts of the extending agent and self-igniting compound are controlled does self ignition occur.

Again, Sippel says virtually nothing about the type of extending agent but does say that the amount is critical. Thus, how does the Examiner concludes that changing the extending agent of Sippel to be one that is similar to that claimed one presents no change in function? Sippel says nothing about the effect of the composition of the extending agent. This cannot be interpreted to mean that just because Sippel is silent means that Sippel tacitly implies that any kerosene will do. If any kerosene would do, why didn't Sippel say so? Applicant submits that it is error for the Examiner to assume that a change in the extending agent from that disclosed in Sippel produces no change in function. At best, Sippel is neutral on this point and the Examiner must derive the purported conclusion with some other objective basis in fact.

The assumption of predictability is also without a factual basis. The Examiner is saying that any kerosene could be used in Sippel and a predictable result would ensue. This is belied by the col. 5 disclosure that shows that different amounts of extending agents are needed with the self-igniting compound depending on the extending agent itself. For example, while 50% JP-5 and 50 % triethylaluminum do not have self ignition, 40% JP-5 and 60% triethylaluminum do. This is a sign of unpredictability in this art and it is error for the Examiner to assume that the use of other fuels than those mentioned by Sippel would produce analogous results. Therefore, the Examiner has stated reasons for the modification of Sippel, which are not based on fact, and this means that the rejection is flawed and must be withdrawn.

This error is made even clearer since the claims now recite that the use of the kerosene and polymer mixture produces advantages in terms of burning rates, burn times, and absorption of fuel onto charcoal. This alone demonstrates that different kerosenes can produce different results such that the Examiner's characterization that all kerosenes are essentially fungible is speculation at best.

The Examiner's rejection is unclear concerning the reliance on Van Gilder and this lack of clarity mandates at least remaking of the rejection.

In the rejection, the Examiner appears to address claims 1, 7, and 14 with only the combination of Sippel, Commercial Kerosene, and RAM. Van Gilder is first cited in conjunction with the rejection of claims 3 and 15. Since Van Gilder teaches a composition of kerosene and polymer that has a relative ratio that overlaps with that stated in claims 3 and 15, the Examiner concludes that the claimed relative amounts are obvious.

The Examiner also appears to suggest that Van Gilder provides a reason to use a kerosene other than that taught by Sippel, see the last 5 lines of page 5 of the Detailed Action. Also, on page 10, the last 4 lines from the bottom, the Examiner appears to reject claim 14 using Van Gilder with Sippel, Commercial Kerosene, and RAM. The last paragraph before the Conclusion on page 12 of the rejection also seems to use Van Gilder in the rejection of the claims.

The actual rejection of claims 1 and 7 as detailed on pages 3 and 4 does not ever mention Van Gilder. However, the Examiner's later comments implies that the

Examiner is using Van Gilder in some fashion for the rejection of claims 1 and 7 and this creates confusion on the record as to whether or not Van Gilder is relied upon to reject claims 1 and 7. This confusion mandates at least remaking of the rejection so that Applicant has the opportunity to properly address the rejection's logic.

To the extent that the Examiner is relying on Van Gilder to reject claims 1 and 7, this reasoning is flawed. The Detailed Action asserts in the sentence bridging pages 6 and 7 that it would be obvious for a skilled artisan to modify the process and composition of Sippel according to the teaching of Van Gilder, assuming that the prior art references were before the inventors at the time the invention was made.

However, this begs the question whether the references would have been before the inventors; it is not credible that Sippel would have been considered by the skilled artisan except to the Examiner, with the benefit of hindsight. Van Gilder is alleged to be relevant because, apparently, Van Gilder would motivate the skilled person to modify the Sippel disclosure because, although lighting of barbecues is not disclosed in either reference, other properties or functions would be provided to the compositions as taught by Van Gilder.

Van Gilder is concerned with maximizing the polymer content consistent with a viscosity which will permit satisfactory use of the resulting solution, the resulting invention being the provision of the polyisobutylene as particles having a uniform diameter below ¼ inch. The resulting solution, in which the solvent may be a lubricating oil or "any normally liquid hydrocarbon material", can be used as adhesives, impregnating materials, dipping or spreading cements, binders when mixed with

woodflour, cork etc., or as waterproof materials, coating compositions, and the like. The Examiner has used "and the like" to allege that Van Gilder encompasses barbecue lighting fluids but, with respect, this is complete speculation on the Examiner's part. None of the specified uses of Van Gilder requires flammability of any description and, as previously asserted, the object (of maximizing the polymer content consistent with viscosity requirements) would, if taken to the extreme, reduce the hydrocarbon content to a level where flammability was totally absent for any purpose, let alone for providing a barbecue lighting fluid. If, therefore, the Examiner's imputation of "any kerosene" to Sippel is based on Van Gilder, the argument is flawed to the point of being ridiculous.

The Examiner has also asserted in conjunction with the reliance on Van Gilder, see pages 6 and 7 of the Detailed Action that the recognition of another advantage in the invention, such other advantage also flowing from following the suggestion of the prior art, cannot provide basis for patentability. However, the Examiner's use of the principal that if a reason exists for a modification, this reason and advantages therefrom do not have to match that of the invention and its advantages to support an obviousness rejection is misguided. In this case, the Examiner cites the advantage of Van Gilder but overlooks the requirement that there still must be a suggestion for the modification, even if the reasoning is unrelated to the invention. In this case, Van Gilder provides no reason to modify Sippel. The mere fact that Van Gilder discloses a particular ratio of kerosene and polymer for the disclosed uses in col. 3, lines 56-60 is not by itself a reason to apply such a ratio to the incendiary composition of Sippel. In fact, Sippel and Van Gilder are not in the least related despite the fact that they share

components of a kerosene and a polymer. Thus, to the extent that Van Gilder would be used to modify Sippel to somehow arrive at the invention, such a rejection is invalid as lacking the required reasoning.

The Examiner's rejection of claims 3 and 15 is in error since the required reasoning to modify Sippel is missing.

The arguments made above are reiterated here for the rejection of claims 3 and 15. In essence, the Examiner is saying that since the ratio of kerosene to polymer of claims 3 and 15 is disclosed in Van Gilder, it is obvious to employ such a ratio in Sippel. This rejection is improper since the Examiner is merely identifying a feature in the prior art but failing to identify the articulated reasoning required by the Supreme Court in *KSR* to say why use the ratio of Van Gilder in Sippel. Therefore, a prima facie case of obviousness is not established against claims 3 and 15.

SUMMARY

Based on the amendments to claim 14 and submission of new claim 20, a prima facie case of obviousness does not exist against these claims. In addition, the Examiner has not established a prima facie case of obviousness against claims 1, 7, and 14 since the prior art is misinterpreted and the reasoning used to make the rejections are flawed. Thus, these independent claims and their respective dependent claims are in condition for allowance.

Accordingly, the Examiner is requested to examine this application and pass all pending claims onto issuance.

If the Examiner believes that an interview would be helpful in expediting the allowance of this application, the Examiner is requested to telephone the undersigned at 202-835-1753.

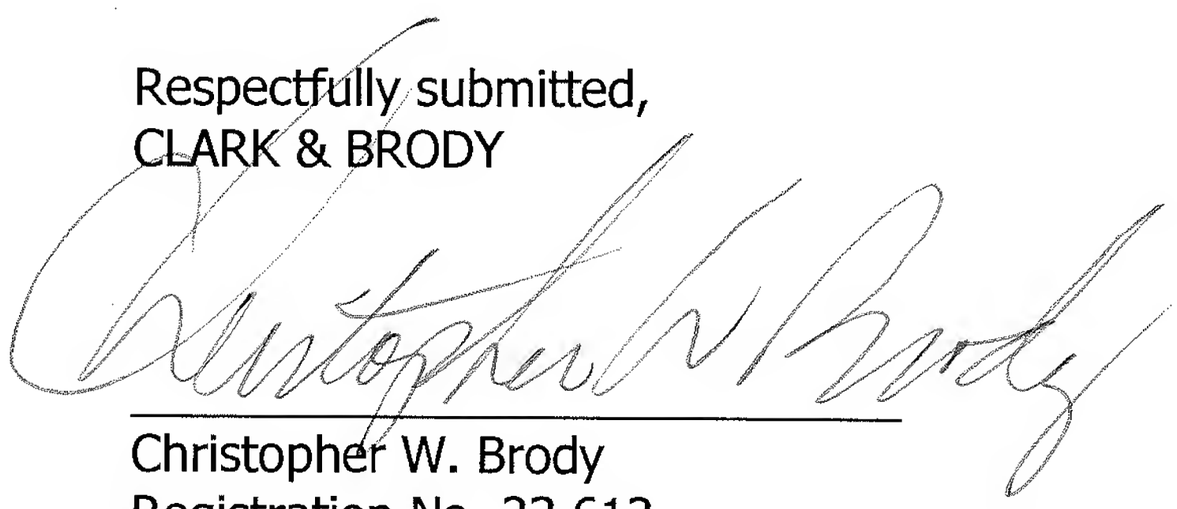
The above constitutes a complete response to all issues raised in the Office Action dated May 11, 2010.

Again, reconsideration and allowance of this application is respectfully requested.

Applicants respectfully submit that there is no fee required for this submission.

Please charge any fee deficiency or credit any overpayment to Deposit Account No. 50-1088.

Respectfully submitted,
CLARK & BRODY



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